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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,704	02/18/2005	Stephen J Bennison	AD6926USPCT	4980

7590 07/30/2007  
E I du Pont de Nemours & Company  
Legal Patents  
Wilmington, DE 19898

EXAMINER
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NAKARANI, DHIRAJLAL S

ART UNIT	PAPER NUMBER
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1773

MAIL DATE	DELIVERY MODE
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07/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,704	<b>Applicant(s)</b> BENNISON ET AL.	
	<b>Examiner</b> D. S. Nakarani	<b>Art Unit</b> 1773	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 7-10, 14-17 and 21-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10, 14-17 and 21-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/13/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 30-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed fail to provide support for the open ended claimed limitation "Flexural Damping of greater than 0.20  $\eta$ ". Since the claimed limitation does not have an upper limit of Flexural Damping and therefore it is an open ended limitation, which constitute new matter.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 8-10, 15-17, 22-24 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Toyama et al (WO 01/64598 A1, herein U.S. Patent 6,903,152 B2 to Toyama et al is used as a translation of WO 01/64598 A1. Recited columns and lines in the following rejections are of U. S. Patent 6,903,152 B1).

Toyama et al disclose an interlayer comprising polyvinyl butyral (PVB) and plasticizer. The amount of plasticizer from 30 to 70 weight parts per 100 weight parts of PVB is disclosed (Col. 9, lines 29-39). Toyama et al disclose that PVB resin composed of a vinyl acetal component (i.e. vinyl butyral component) and a vinyl alcohol component (Col. 6, lines 42-43). Toyama et al's Example 15, show the composition of layer (A) 40 weight parts of tetraethylene glycol di-n-heptanoate (4G7) as plasticizer per 100 weight parts of PVB resin (butyralization degree = 68.9 mol%, acetylation degree = 0.9 mol%). Toyama et al also disclose fabricated a glass comprising glass panel/Layer A/Layer B/Layer A/glass panel (Example 15). Toyama et al disclose use of the fabricated glass laminate as glazing of road vehicles and of buildings (Col. 1, lines 14-20 and col. 15, lines 38-45). Toyama et al do not disclose claimed hydroxyl numbers. However Toyama et al's disclosed butyralization (acetalization) degree from 60 to 85 mol%, the PVB resin inherently deemed to have hydroxyl number within the claimed range unless shown otherwise.

6. Claims 1-3, 7-10, 14-17 and 21-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyama et al (WO 01/64598 A1, herein U.S. Patent 6,903,152 B2 to Toyama et al is used as a translation of WO 01/64598 A1. Recited columns and lines in

the following rejections are of U. S. Patent 6,903,152 B1) in view of D'Errico et al (U. S. Patent 6,559,212 B1).

Toyama et al, which has been discussed above in paragraph 5, also disclose plasticizers such as triethylene glycol di-2-ethylbutyrate (3GH0, triethylene glycol di-2-ethylhexanoate (3G0), triethylene glycol di-n-heptanoate (3G7) and tetraethylene glycol di-n-heptanoate (4G7) (Col. 9, lines 17-22 and col. 7, lines 26-42). Toyama et al fails to disclose claimed hydroxyl numbers and claimed Flexural Damping.

D'Errico et al disclose a plasticized butyral sheet comprising polyvinyl butyral having hydroxyl content from 17 to 20.3% and 35 to 45 weight parts of plasticizer triethylene glycol di-2-ethylhexanoate per 100 weight parts of polyvinyl butyral resin plasticizer triethylene glycol di-2-ethylhexanoate (3G0)(Tables 1 and 2, col. 1, lines 45-55, claims). D'Errico et al's plasticized polyvinyl butyral sheet is useful for making a glass laminate for building and vehicle windows, show cases etc. (Col. 1, lines 9-19). D'Errico et al teach effect of hydroxyl numbers in the PVB resin on compatibility of plasticizer. D'Errico et al also teach determination of compatible amount of plasticizer.

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of D'Errico et al in the invention of Toyama et al to use PVB resin having hydroxyl numbers from 17 to 19.5 weight % and plasticizer such as 4G7. A person of ordinary skill in the art would have found it obvious to optimize amount of plasticizer depending on desired glass transition temperature of interlayer for desired sound insulation.

No claims are allowed.

7. Receipt of Information Disclosure Statement filed April 13, 2007 is acknowledged. All recited documents have been made of record.
8. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.
9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

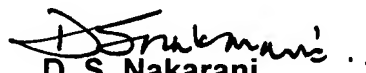
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
D. S. Nakarani  
Primary Examiner  
Art Unit 1773

DSN

July 15, 2007.